WHAT IS CLAIMED IS:

1. A laser package comprising:

a laser diode source having a first Fabry-Perot cavity having a first cavity axis between a back facet and a front facet, the back facet having a first reflectance and the front facet having a second reflectance, the first reflectance being greater than the second reflectance, for providing a first light output for an optical application;

a light monitor positioned adjacent to the back facet and aligned to receive a second light output from the back facet of the laser diode source;

a pigtail fiber having a lensed fiber input end and positioned from the front facet of the laser diode source to form an optical coupling region and aligned relative to a lasing cavity of the laser diode source to receive the first light output into the fiber, the first light output exiting the package for coupling to the application;

a first portion of the first light output from the lasing cavity reflected off the lensed fiber input end with a second portion directed back into the lasing cavity and a third portion reflected off of the laser diode front facet

said front facet forming with the lensed fiber input end a second Fabry-Perot cavity generating light that is periodically in and out of phase with the light generated in the first Fabry-Perot cavity due to changes in the length of the second Fabry-Perot cavity caused by package ambient temperature changes so that a tracking error is generated in a signal developed by the light monitor; and

means in said package for suppressing the formation of the second Fabry-Perot cavity.

2. The laser package of claim 1 wherein said means further includes means to suppress changes in the length of the second Fabry-Perot cavity.

3. The laser package of claim 2 wherein said suppression means comprises a platform upon which the laser diode source and the lensed fiber input end are mounted, the platform having a first stiffness and a housing base of the laser

package having a second stiffness, wherein the first stiffness is greater than the second stiffness.

4. The laser package of claim 3 wherein the platform is approximately two times thicker than the housing base to prevent flexure of the platform due to changes in ambient temperatures in the laser package.

5. The laser package of claim 3 wherein said platform comprises silicon, silicon carbide, aluminum nitride, sapphire, diamond or a ceramic material.

6. The laser package of claim 1 wherein said lensed fiber input end comprises a chisel lens, an angled chisel lens, a pointed chisel lens, a double chisel lens, a biconic lens, a Fresnel lens, a binary Fresnel lens, an offset biconic lens, or an angled biconic lens formed on the end of said lensed fiber input end.

7. The laser package of claim 1 wherein said lensed fiber input end comprises an offset biconic lens having an origin of a first radius of a lens surface offset from a longitudinal center axis of the pigtail fiber at the lensed fiber input end.

8. The laser package of claim 7 wherein the center of a core of the pigtail fiber is co-planar with the first cavity axis of the laser diode source.

9. The laser package of claim 7 wherein the center of a core of said pigtail fiber at the lensed fiber input end is at an angle of about 2-6 degrees relative to the first cavity axis of the laser diode source.

10. The laser package of claim 7 wherein the origin is offset between 1/3-2/3 of a mode field diameter.

11. The laser package of claim 7 wherein the pigtail fiber has a core with a core diameter and the origin is offset 1/4 to 2/3 of the core diameter.

12. The laser package of claim 7 wherein the origin is offset from the longitudinal center axis by about 2 microns.

13. The laser package of claim 6 wherein a longitudinal optical axis of said pigtail fiber input end is aligned at an angle of about 2-6 degrees relative to the first cavity axis.

14. The laser package of claim 1 further comprising a reflective coating provided on a surface of said lensed fiber input end having a third reflectance, the third reflectance being greater than the second reflectance of said front facet of said laser diode source.

15. The laser package of claim 1 further comprising an anti-reflective coating provided on a surface of said lensed fiber input end having a third reflectance, the third reflectance being less than the second reflectance of said front facet of said laser diode source.

16. The laser package of claim 1 wherein said light monitor comprises a monitor photo diode.

17. The laser package of claim 16 wherein said monitor photo diode is an avalanche photo diode.

18. The laser package of claim 1 wherein said pigtail fiber includes a fiber Bragg grating to stabilize the light output from said first Fabry-Perot cavity.

19. The laser package of claim 18 wherein said fiber Bragg grating causes said laser diode to operate in the coherence collapse regime.

20. The laser package of claim 18 wherein said fiber Bragg grating has a reflectivity level higher than the internal cavity reflectivity level of said laser diode front facet.

21. The laser package of claim 20 wherein the fiber Bragg grating has a reflectivity greater than about 6%.

22. The laser package of claim 1 wherein said package includes a snout to support the pigtail fiber, said pigtail fiber includes at least two fiber Bragg gratings to stabilize the light output from said first Fabry-Perot cavity and treat circular

polarization light propagating in the package snout such that more light is reflected back into the plane of polarization of the laser diode source.

23. A laser source module comprising:

a laser diode having a front facet; and

an optical fiber with a center axis and having

a lensed fiber end having a biconic lens with a center of curvature offset from the center axis of the optical fiber.

24. The laser source module of claim 23 wherein the center of curvature is offset from the center axis by about 2 microns.

25. The laser source module of claim 23 wherein the optical fiber has a fiber core with a fiber core diameter and the center of curvature is offset from the center axis by about one third to one half the fiber core diameter.

26. The laser source module of claim 23 wherein the center of curvature is offset from the center axis by about 1/3-2/3 of a mode field diameter

27. The laser source module of claim 23 wherein the laser diode has an optical axis and the optical axis of the laser diode forms an angle of between about 0-6 degrees with the center axis of the optical fiber.

28. The laser source module of claim 27 wherein the center axis of the optical fiber is co-planar with the optical axis of the laser diode.

29. The laser source module of claim 27 where the optical axis of the laser diode is parallel to the center axis of the optical fiber.

30. The laser source module of claim 27 wherein the optical axis of the laser diode is co-linear with the center axis of the optical fiber.

31. A laser source module comprising:

a laser diode having a front facet; and

an optical fiber with a center axis and having

a lensed fiber end having an angled biconic lens with a first lens axis angled to the center axis at an angle of between about 2-12 degrees.

32. The laser source module of claim 31 wherein in the angled biconic lens has a lens tip lying on the center axis.

33. A laser module comprising:

a laser diode having a front facet;

an optical fiber having a fiber end disposed proximate to the front facet to couple light emitted from the front facet to the optical fiber, the front facet and the fiber end forming a coupling region there between; and

a monitor photo diode disposed to couple light from at least one of the fiber end and the front facet.

34. The laser module of claim 33 wherein the photo diode is disposed adjacent to the coupling region.

35. The laser module of claim 33 wherein the laser diode has an aperture in the front facet, the aperture having a fast axis and a slow axis, the monitor photo diode being disposed to couple light from the laser diode in the fast axis.

36. The laser module of claim 33 wherein the laser diode has an aperture in the front facet, the aperture having a fast axis and a slow axis, the monitor photo diode being disposed to couple light from the laser diode in the slow axis.

37. The laser module of claim 33 wherein the monitor photo diode is disposed to couple light reflected from the fiber end.

38. The laser module of claim 37 further comprising a reflectance-increasing coating on the fiber end.

39. The laser module of claim 33 wherein the monitor photo diode is disposed to couple light emitted from the fiber end.

40. The laser module of claim 33 wherein the laser diode and the optical fiber are mechanically coupled to a substrate and the monitor photo diode is disposed between the coupling region and the substrate.

41. The laser module of claim 40 wherein the laser diode and the optical fiber are mechanically coupled to the substrate with a submount.

42. A laser package with reduced tracking error, the laser package comprising:

a laser diode source having a laser cavity between a front facet and a back facet,

an optical fiber having an angled chisel lensed fiber input end disposed proximate to the front facet of the laser diode source to receive a first light output from the front facet, the angled chisel lensed fiber input end having a lens edge that is not perpendicular to a center axis of the optical fiber; and

a laser monitor disposed proximate to the back facet of the laser diode source to receive a second light output from the back facet, the second light output including amplified back-reflected light.

43. The laser package of claim 42 wherein the optical fiber is attached to the laser package with a soft material.

44. The laser package of claim 43 wherein the soft material is lead-tin solder or room-temperature vulcanizing adhesive.